

We claim:

1. A torsion bar that can be installed in a seat belt retractor as an energy absorber, comprising a torsion bar and a gear integral therewith, wherein the gear is created by submitting the torsion bar to a rolling operation.
2. The torsion bar according to claim 1, wherein the gear is arranged at an end of the torsion bar.
3. The torsion bar according to claim 1, wherein the gear is arranged near an end of the torsion bar.
4. The torsion bar according to claim 1, wherein a flange integral with the torsion bar is located at an end of the torsion bar with a circumferential groove in the bar disposed between the flange and the gear.
5. The torsion bar according to claim 3, wherein a flange integral with the torsion bar is located at an end of the torsion bar with a circumferential groove in the bar disposed between the flange and the gear.
6. The torsion bar according to claim 4, wherein the circumferential groove is created by a rolling operation.
7. The torsion bar according to claim 5, wherein the circumferential groove is created by a rolling operation.
8. The torsion bar according to claim 4, wherein the circumferential groove extends into the bar material more deeply in a radial direction than a circumferential periphery of the adjacent gear.
9. The torsion bar according to claim 5, wherein the circumferential groove extends into the bar material more deeply in a radial direction than a circumferential periphery of the adjacent gear.

10. The torsion bar according to claim 6, wherein the circumferential groove extends into the bar material more deeply in a radial direction than a circumferential periphery of the adjacent gear.

11. The torsion bar according to claim 7, wherein the circumferential groove extends into the bar material more deeply in a radial direction than a circumferential periphery of the adjacent gear.

12. The torsion bar according to claim 1, further comprising a second gear integral with the torsion bar located at another end of the torsion bar.

13. The torsion bar according to claim 4, further comprising a second gear integral with the torsion bar located at another end of the torsion bar.

14. The torsion bar according to claim 5, further comprising a second gear integral with the torsion bar located at another end of the torsion bar.

15. The torsion bar according to claim 6, further comprising a second gear integral with the torsion bar located at another end of the torsion bar.

16. The torsion bar according to claim 7, further comprising a second gear integral with the torsion bar located at another end of the torsion bar.

17. The torsion bar according to claim 12, wherein the second gear is created by submitting the torsion bar to a rolling operation